

California ISO Revenue Requirements Model Operating Instructions

Introduction

The revenue requirements model has three types of worksheets:

- A “Summary” worksheet that provides the forecasts of the HV revenue requirements, HV gross plant, HV rate base and TAC rate. There are no input cells on the Summary worksheet.
- An “Existing” facilities worksheet that captures all of the model input related to existing HV facilities and develops the forecast revenue requirements associated with existing HV facilities.
- A “New” facility worksheet for each new HV facility that captures all of the model input for the new HV facility and develops the forecast revenue requirements associated with the new HV facility.

The New facility worksheets are designed to be stand-alone and can be copied into a separate workbook for review by other parties, such as the respective PTO.

The model has been initially configured to accommodate up to 15 new HV facilities. Additional new facilities can be added to the model by adding a copy of one of the New facility worksheets to the end of the model, and modifying the Summary worksheet to include the new project in each of the three summary tables.

All worksheets cover the 15-year period from 2012 to 2026, although the print settings have been set to print only the first 10 years.

Input cells are highlighted in yellow.

Further details on the Existing and New facility worksheets are provided below.

Existing Facilities Worksheet

The total HV revenue requirements are comprised of the HV Base TRR, the HV TRBAA and the HV Standby Credit.

The first section of the Existing facilities worksheet sets out the input assumptions used to forecast the revenue requirements for the existing HV facilities:

- Line 1 - the capital maintenance rate (expressed as a percentage of the prior year gross plant) is used to forecast total gross plant for the existing HV facilities (line 116). Since existing HV gross plant is approximately \$9 billion, a capital maintenance rate of 1% will result in forecast annual capital maintenance additions of approximately \$90 million.
- Line 2 - for simplicity, in the model all revenue requirement items other than amortization (depreciation), return (both debt and equity) and income taxes are referred to as “Operations and Maintenance” or “O&M”. For example, property taxes are included as part of O&M. The O&M escalation rate is used to forecast the O&M portion of the Base TRR (line 121) and the small PTO portion of the Base TRR (line 123).
- Line 3 – the HV TRBAA escalation rate is used to forecast the total HV TRBAA (line 31).
- Line 4 – the HV Standby Credit escalation rate is used to forecast the total HV Standby Credit (line 44).
- Line 5 – the gross load growth rate is used to forecast total gross load (line 70).

For all forecast assumptions, the model applies the forecasts entered in the “Reference” column to each year of the forecast. If desired, different forecasts can be entered for each year using the blue shaded cells. Furthermore, annual forecasts for the total HV TRBAA, total HV standby credit and the total gross load can be entered directly using the blue shaded cells in lines 31, 44 and 70 respectively, in which case the forecast assumptions entered in lines 3, 4 and 5 are not used.

The next sections of the Existing facilities worksheet (lines 6 to 80) are taken from the California ISO’s January 1, 2012 TAC Rates summary and include:

- The HV Base TRR for each PTO.
- The HV TRBAA for each PTO.
- The HV Standby Credit for each PTO.
- The Total HV Revenue Requirement for each PTO.
- The Gross Load for each PTO.
- The current TAC rate.
- The current HV utility specific rates.

The next sections of the Existing Facilities worksheet (lines 81 to 115) summarize the gross plant, rate base and Base TRR for the largest five PTOs:

- PGE
- SCE
- SDGE
- Atlantic P-15
- Trans-Bay Cable

These five PTOs account for almost 95% of the total HV Base TRR.

With the exception of Atlantic Path-15, the components of the HV Base TRR for each of the PTOs were not readily available. In these cases, the best available information was included in the Reference column, and was then pro-rated to match the known HV Base TRR for each PTO. In some cases the data used was from the PTO's original application, since the settlement documentation did not include the required detail. In other cases, only the details on the combined HV and LV Base TRR were available. Data that was pro-rated is highlighted in light brown.

The final section of the worksheet (lines 116 to 124) calculates the total HV Base TRR for the existing facilities:

- Line 116 – Gross Plant is increased by the forecast capital maintenance rate (line 1).
- Line 117 – Rate Base is forecast by adding the increase in Gross Plant (line 116) and deducting the forecast amortization (line 118). The model assumes that there is no impact on rate base due to other changes such as changes in the amount of deferred taxes.
- Lines 118 – Amortization is forecast by applying the actual average depreciation rate (shown in the Reference column) to the forecast of Gross Plant (line 116).
- Lines 119 and 120 – Return and Taxes are forecast by applying the actual average return rate and composite income tax rate (shown in the Reference column) to the forecast of Rate Base (line 117).
- Lines 121 and 123 – Operations and Maintenance and the revenue requirements of the other PTOs are increased by the forecast O&M escalation (line 2).

If desired, the forecast average depreciation rate, return rate and composite income tax rate can be changed by inserting the desired forecasts in the Reference column of lines 118, 119 and 120 respectively (blue shaded cells).

New Facilities Worksheets

For each new project, the forecast assumptions for the new facility are entered on lines 1 to 18 of the respective New facility worksheet:

- Line 1 – the in-service year is entered in the format “yyyy”. All additions are assumed to take place at mid-year.
- Line 2 – the annual capital expenditures are entered in nominal dollars. Any capital expenditures after the in-service year are added to rate base in the year of expenditure.
- Line 3 – the carrying cost applied to the CWIP balance can be either the cost of debt (“IDC”) or the average return rate (“AFUDC”).
- Line 4 – CWIP can be included (“Y”) or excluded (“N”) from rate base. If CWIP is included in rate base, there is no carrying cost applied to the CWIP balance and line 3 is not used.
- Line 5 – the average amortization rate for revenue requirement purposes is entered. The amortization method for revenue requirement purposes is assumed to be straight-line.
- Lines 6 to 10 – the percentage of debt in the capital structure, the cost of debt and the cost of equity are entered on lines 6, 7 and 9 respectively. The percentage of equity in the capital structure (line 8) and the average return rate (line 10) are calculated.
- Lines 11 to 13 – Federal income taxes are based on the MACRS 15-year method. Line 11 shows the annual depreciation percentages under this method (not an input line). Federal income taxes can be deferred or not deferred by entering a “Y” or “N” respectively on line 12. The federal income tax rate is entered on line 13.
- Lines 14 to 16 – State income taxes are based on the declining balance method. The declining balance percentage is entered on line 14 (for example, entering 200% on line 14 results in the use of the double declining balance method). State income taxes can be deferred or not deferred by entering a “Y” or “N” respectively on line 15. The state income tax rate is entered on line 16.
- Lines 17 and 18 – the incremental O&M costs associated with the new facility are entered on line 17, expressed as a percentage of the capital addition. The incremental O&M costs are assumed to start the year following the in-service date. Thereafter, the O&M costs are escalated by the rate entered on line 18.

For all forecast assumptions, the model applies the forecasts entered in the Reference column to each year of the forecast. If desired, different forecasts can be entered for each year using the blue shaded cells.